U.S. Fish & Wildlife Service
Fishery Resources

1984

Annual Project Report
Fishery Management Program

Hillside National Wildlife Refuge
(Management Area)

Holmes and Yazoo Couties, AR
(County and State)

By

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Fishery Management Biologist

1. Description of Area: Hillside NWR, 15,383 acres, is in the Mississippi/Yazoo River alluvial floodplain. Managed waters consist of 46 borrow ponds approximately 1 acre each resulting from the construction of a floodway levee at the refuge's western border. Other waterbodies are fished but are subject to periodic inundation from Black Creek and are not managed.

2. Year Fishery Management Began 1979

3. Total of Lakes, Ponds, Reservoirs on Management Area: No. 86 Acres 220

4. Total of Lakes, Ponds, Reservoirs Under Management: No. 46 Acres 46

5. Number of New Lakes, Ponds, Reservoirs Developed Since Last Report (To be included in Nos. 3 & 4) No. 0 Acres

6. Total Number of Streams on Management Area: No. 3 Miles Acres 200

7. Total Number of Streams Managed: No. 0 Miles Acres

8. Dates Visited: Sept. 11-14, 1984

9. Total Man-days Expended in Field on Management Area: 2

10. Total Man-days Fishing This Year: 2135 (9 months) Last Year: 7000 est.

11. Is Public Fishing Permitted? YES

12. Persons Contacted (Names & Titles): Larry Moore, Forester

MANAGEMENT RECORD

BODY OF WATER			STOCKING RECORD		
NAME OF LAKE POND OR STREAM	ACRES/MILES	SPECIES MANAGED	SPECIES	NUMBER	AVERAGE LENGTH (inches)
Borrow ponds	46 acres	LMB, BLG, RSF, CCF	NONE IN FY84		

CHEMICALS USED IN CONTROL

NAME OF LAKE POND OR STREAM	CHEMICAL	TARGET	POUNDS OF ACTIVE INGREDIENTS	SURFACE ACRES OR MILES	ACRE-FEET TREATED
NONE IN 1984					

Hillside National Wildlife Refuge was visited by John S. Forester, fishery management biologist, September 11-14, 1984. The purpose of the trip was to sample the one acre borrow ponds along the west levee of the refuge. Of the 78 borrow ponds, 46 are managed due to historically low susceptability to flooding from nearby Black Creek. However, in the winter/spring of 1983, flooding of the ponds occurred. As a result, buffalo and carp have reinvaded the series of ponds. Sampling was accomplished with rotenone. Ponds 46 and 66 were totally poisoned. Results follow.

POND 46

Species	Number	Length (in.)	Wt. (lbs.)
Largemouth bass	7	4-6	-
"	3	7-11	1.5
"	3	12-18	8.5
Channel catfish	22	11-26	29.0
White/black crappie	75+	3-5	-
"	25+	6-9	-
Redear sunfish	100+	1-3	-
"	42	4-5	-
"	35	6-8	13.0
Bluegill	100+	1-3	-
"	50	4-5	-
"	35	6-7	8.0
Warmouth	2	1-3	-
"	3	4-5	-
"	1	6-7	-
Bigmouth/Smallmouth Buffalo	17	16-23	61.0
Common carp	7	20-27	29.0
Bowfin	6	15-19	15.0
Spotted gar	32	19-24	28.0
Freshwater drum	5	11-14	6.0
Gizzard shad	250+	3-13	40.0

POND 66

Species	Number	Length (in.)	Wt. (lbs.)
Largemouth bass	3	12-18	2.7
Channel catfish	4	11-20	6.3
White/black crappie	20	1-3	-
"	45	4-5	4.0
"	5	7-9	1.0
Redear sunfish/ bluegill	200+	1-3	-
"	90	4-5	-
"	25	6-7	7.0
Bigmouth buffalo	36	16-27	252.0
Smallmouth buffalo	5	17-25	29.0
Common carp	9	18-26	47.0
Gizzard shad	300+	4-12	50.0+
Bowfin	2	17-22	5.0
Spotted gar	3	19-27	4.0

Management of the borrow ponds is impossible without a substantial reduction in the buffalo/carp production. These fish are very effective food gatherers and enough of them makes it very difficult to develop a sport fishery. Netting the ponds was discussed and recommended in the 1983 annual report but transfer of the manager and other personnel changes precluded any activity in this area. The removal of these fish is still very important. Perhaps the use of commercial fishermen, each assigned a series of ponds, would better facilitate fish removal. Several refuges issue commercial permits for fishing. In this manner the unwanted fish provide financial returns to the commercial fishermen and the waterbody is made more conducive to supporting a sport fishery. A stipulation could be added that called for removal of or killing and returning to the water of all "rough" fish (carp, shad, gar, etc.) not desired for commercial sales. Gamefish, including catfish, would be returned to the water alive. Mesh size should be no smaller than 4" stretched mesh (2" bar mesh). The best time for setting nets is the cooler months which are now approaching. Provided there would be insignificant conflict with hunters, the netting could begin this fall.

Another practice that would aid the fishery and probably wildlife as well would be the seeding of Japanese millet along the presently exposed pond edges. Usually during this dry time of year there is a 5 to 15 foot strip of exposed bottom at the west end of each pond. By seeding the bottom as it becomes exposed and while the mud is still moist, optimum seed germination should result. As discussed with Mr. Lucien Newton, two seedings, one in July and one in August, would allow for a good growth of the millet prior to reflooding by winter rains. Use of the millet by ducks should be good and following death and decay of the plants, valuable nutrients would be returned to the pond to benefit the fishery. Stocking of catfish will be scheduled as soon as they become available--hopefully this winter.

Recommendations:

1) Remove buffalo and carp from the borrow ponds with the aid of commercial fishermen. Restrict mesh size to a minimum of 4 inches (2 inch bar mesh).
2) Seed exposed pond bottoms during mid to late summer with Japanese millet.
3) Stock 100 channel catfish fingerlings (5-7" each), as soon as they become available, into each pond.